CLAIMS

I CLAIM:

1. A coin dispensing system comprising:

a drawer for supporting vertical tubes of currency;

means for withdrawing tubes of currency from the drawer;

a sensor for sensing quantity of tubes in the drawer; and

a control system operatively associated with the sensor for determining quantity of currency in the drawer.

2. The coin dispensing system of claim 1 wherein the drawer comprises a horizontal bottom wall connected to opposite side walls, and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for receiving vertical tubes of currency.

3. The coin dispensing system of claim 2 further comprising a pushing plate in each column and bias means for biasing each pushing plate toward the withdrawing means.

4. The coin dispensing system of claim 3 wherein the sensor comprises a sensing element for sensing position of each pushing plate.

5. The coin dispensing system of claim 1 wherein the withdrawing means comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency.

6. The coin dispensing system of claim 1 wherein the control system stores information representing value of currency in each vertical tube of currency and determines quantity of currency in the drawer responsive to the sensed quantity and the stored information.

7. A coin dispensing system comprising:

a drawer including a bottom wall connected to opposite side walls, and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for supporting vertical tubes of currency;

a plurality of dispensers, one for each column, each for withdrawing tubes of currency from an associated column;

a plurality of sensors, one for each column, each for sensing quantity of tubes in the associated column; and

a control system operatively associated with the sensors for determining quantity of currency in the drawer.

8. The coin dispensing system of claim 7 further comprising a plurality of pushing plates, one for each column, and bias means for biasing each pushing plate toward an associated dispenser.

9. The coin dispensing system of claim 8 wherein each sensor comprises a sensing element for sensing position of each pushing plate.

10. The coin dispensing system of claim 7 wherein each dispenser comprises a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency.

11. The coin dispensing system of claim 7 wherein the control system stores information representing value of currency in each vertical tube of currency in each column and determines quantity of currency in the drawer responsive to the sensed quantity and the stored information.

12. The coin dispensing system of claim 11 wherein the control system includes a display displaying quantity of vertical tubes of currency in each column and value of currency in each column.

13. The coin dispensing system of claim 7 wherein further comprising a plurality of biased pushing plates, one for each column, and each sensor comprises a magnet on one of the pushing plates and a plurality of magnet operated switches spaced along the associate column to sense position of the pushing plate.

14. The coin dispensing system of claim 13 wherein the control system comprises a resistor network for each column electrically connected to the plurality of magnet operated switches for the associated column so that voltage of the resistor network varies with position of the pushing plate.

15. The coin dispensing system of claim 14 wherein the control system detects

the voltage for each resistor network.

16. A coin dispensing system comprising:

a drawer including a bottom wall connected to opposite side walls, and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for supporting vertical tubes of currency;

a plurality of pushing plates, one for each column, and biasing means for biasing each pushing plate forward;

a magnet on each of the pushing plates;

a plurality of magnet operated switches spaced along each column to sense position of the associated magnet;

a plurality of impedance networks, one for each column, each electrically connected to the plurality of magnet operated switches for the associated column so that voltage of the impedance network varies with position of the associated pushing plate; and

a control system operatively associated with the impedance networks for determining quantity of currency in the drawer.

17. The coin dispensing system of claim 16 wherein the control system stores information representing value of currency in each vertical tube of currency in each column and determines quantity of currency in the drawer responsive to the sensed quantity and the stored information.

18. The coin dispensing system of claim 17 wherein the control system

2 includes a display displaying quantity of vertical tubes of currency in each column and value of currency in each column.

19. The coin dispensing system of claim 16 further comprising a dispenser for

2 each column comprising a semi-cylindrical housing for receiving a vertical tube of currency and means for rotating the housing for dispensing the vertical tube of currency.

20. The coin dispensing system of claim 16 wherein the impedance network

2 comprises a resistor network.